U.S. Geological Survey Open-File Report 98-xxx

USGS National Coastal Assessment

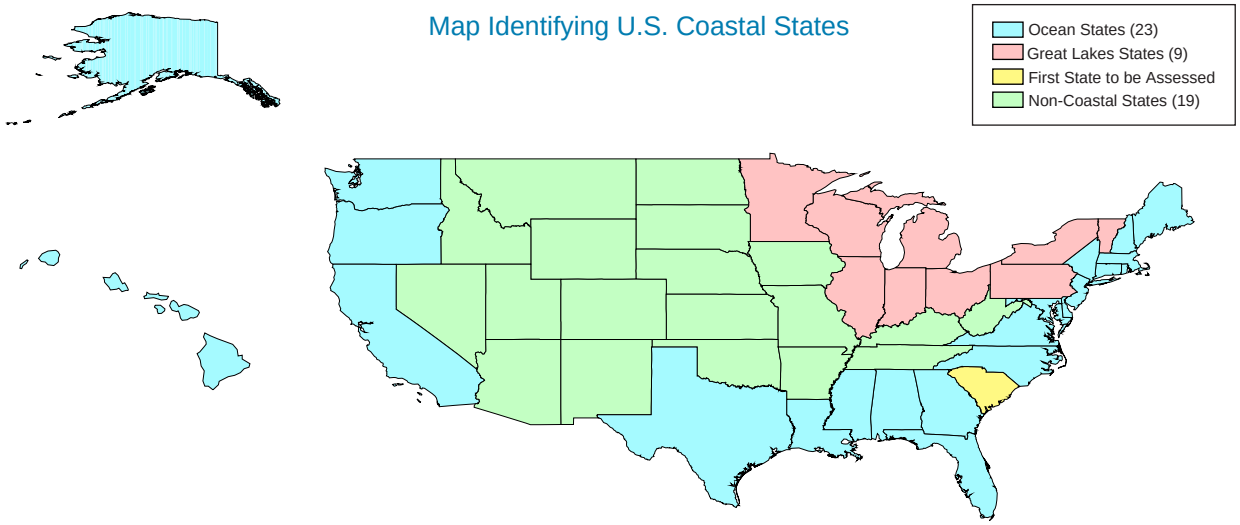
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

MAPS (GIS BASED)

- Present Shoreline Position
- Historic Shoreline Position
- Topography (DEMs)
- LIDAR Topography
- Offshore Bathymetry
- Beach Profiles
- Tidal Range
- Past Hurricane Tracks
- Coastal Vulnerability Index
- Roads
- FEMA Flood Insurance Rate Maps
- Population by Zipcode
- Aggregate Property Values

"The coastal margin is among the most densely populated, developed, property valued, tax generating, income generating, and recreational valued region of the United States. The dynamic natural processes and human-induced changes within this margin are poorly understood, yet result in a highly mobile coastal zone that is subject to rapid (decadal or less) change. A primary goal of the USGS National Coastal Assessment is to develop a GIS based inventory of scientific data including those variables known to contribute to coastal change. For planning and other policy management purposes, this data base will provide a quantitative basis for making real-time and long-term predictions of future coastal change in response to storms, sea-level rise, tectonic movement, beach renourishment, and land use changes, ."

- Dr Christopher Barton
US Geological Survey



Hurricane Fran

Before

After

Before and after photos illustrate damage wrought by Hurricane Fran (category 3), which made landfall at Cape Fear, North Carolina on Septemeber 5, 1996

The Nation Needs a Quantitative Data Base to Assess Past, Present, and Future Rates of Coastal Change

The Committee on Beach Nourishment and Protection of the National Research Council (*Beach Nourishment and Protection, National Academy Press, Washington DC, 1995, p. 157*) has recommended that the USGS in collaboration with the Army Corps of Engineers and NOAA initiate a cooperative program to construct and maintain a data base that would document decadal rates of erosion and accretion for all US shorelines. Construction of a national data base on the scientific variables thought to control coastal change will provide a basis for scientific analysis and modeling over length scales of meters to hundreds of kilometers and over time scales of one to one-hundred years. The USGS Marine and Coastal Geology Program prospectus states that it supports fundamentaland mission investigations aimed at a systematic understanding and description of the geologic setting, geolgic history, geologic processes, geohazards, and seafloor environmental conditions of the US coastal and offshore areas.

Hurricane Fran

Before

After

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards.

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